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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KIYOKO UEDA,
ICHIRO NAKAMURA, and KIYOYASU SAKURADA

Appeal 2010-000118
Application 10/575,662
Technology Center 1700

Before CHUNG K. PAK, CHARLES F. WARREN, and
MARK NAGUMO, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicants appeal to the Board from the decision of the Primary Examiner finally rejecting claims 1, 2, 5-7, and 9-22 in the Office Action mailed October 18, 2008, and subsequently refusing to allow claim 13 as amended in the Amendment filed February 5, 2009, which was entered in the Office Action mailed February 26, 2009. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R. § 41.31(a) (2008).

We reverse the decision of the Primary Examiner.

Claim 1 illustrates Appellants' invention of a process for producing resin-coated metal particles, and is representative of the claims on appeal:

1. A process for producing resin-coated metal particles comprising: providing metal particles with surfaces coated with silica; combining the silica-coated metal particles with a polymerizable group-containing silane coupling agent so as to absorb the polymerizable group onto the surfaces of the particles; and forming a polymeric resin coating on the surfaces of the silica-coated metal particles by polymerizing a composition comprising a polymerizable monomer in the presence of the polymerizable group-containing particles.

Appellants request review of the grounds of rejection under 35 U.S.C. 35 U.S.C. §§ 102(b) and 103(a) advanced on appeal by the Examiner: claims 1, 5-7, 10, 15, and 20-22 under § 102(b) over Mulvaney (US 6,548,168 B1); claim 2 under § 103(a) over Mulvaney in view of Nakazawa (US 5,853,938); and claims 9, 11-14, and 16-19 over Mulvaney in view of Nakatsuka (EP 0 949 027 A1), Hakata (US 2001/0051311 A1), and Mizuno (US 2002/0191983 A1). App. Br. 5;¹ Ans. 3, 4, and 5.

Opinion

Appellants principally submit that the Examiner erred in finding that Mulvaney would have described the claimed process for producing resin-coated metal particles encompassed by claim 1 because Mulvaney would not have described the initial step of “providing metal particles with surfaces coated with silica” specified in claim 1. App. Br. 7-8; Reply Br. 1-3.

We agree with Appellants contention that the subject first step of claim 1 requires that the “surface” of the “metal particles” is directly “coated with silica.” App. Br. 7-8; Reply Br. 2-3. Our interpretation of claim 1 in

¹ Appellants did not list claims 17-19 as included in the third ground of rejection which we determine to be harmless error.

this respect, comports with the disclosure in the Specification that “[i]n the step of coating the surfaces of the metal particles with silica, a silica coating agent prepared by hydrolyzing an alkoxide compound for forming silica is mixed with the metal particles.” Spec. 6:25 to 7:6.

We further agree with Appellants’ arguments that Mulvaney’s process does not result in the claimed silica coated metal particles as the Examiner contends. Ans. 4 and 6-7. We find that, as Appellants point out, Mulvaney coats a metal particle with a bifunctional ligand and then further coats the ligand layer. Mulvaney, e.g., col. 2, ll. 26-49, col. 4, ll. 21-47, col. 5, l. 25 to col. 7, l. 42, and col. 8, l. 59 to col. 9, l. 51. We find that Mulvaney describes applying a silica coating on cadmium sulphide (CdS) particles by first coating the particles with 3-mercaptopropyl trimethoxysilane (MPS), followed by coating sodium silicate, the sequence illustrated in Mulvaney Figure 1. Mulvaney col. 4, l. 3, col. 6, ll. 15-16 and 20-23, col. 7, ll. 5-42, col. 8, l. 59 to col. 9, l. 51, and Fig. 1. *See* Reply Br. 2.

Accordingly, in the absence of a case of anticipation, we reverse the ground of rejection of claims 1, 5-7, 10, 15, and 20-22 under 35 U.S.C. § 102(b) over Mulvaney.

We further agree with Appellants that none of Nakazawa, Nakatsuka, Hakata, and Mizuno provide a teaching of “metal particles with surfaces coated with silica” as claimed and thus do not supply the factual foundation missing from Mulvaney that is necessary for a case of obviousness. App. Br. 8-9. Accordingly, in the absence of a case of obviousness, we reverse the grounds of rejection of claims 2, 9, 11-14, and 16-19 under 35 U.S.C. § 103(a) over Mulvaney in view of these references.

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The Primary Examiner's decision is reversed.

REVERSED

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